<u>IN THE CLAIMS</u>

Please cancel claims 1-6, 9, 26-30, 49 and 50, and amend

the claims as follows:

1-6. (Cancelled).

7. (Currently Amended) ~~The data processing device of claim 6~~<u>A</u>

<u>data processing device comprising</u>:

<u>at least one input for receiving data including</u>

<u>viewer profile data; and</u>

5 <u>data regarding a television program;</u>

<u>a medium readable by the data processing device coupled to</u>

<u>the input, said medium storing said viewer profile data; and</u>

<u>a processor, the processor being adapted to perform the</u>

<u>following:</u>

10 <u>calculating a probability that the television program is a</u>

<u>desired one; and</u>

<u>supplying a recommendation regarding the television</u>

<u>program based on the probability,</u>

<u>wherein the processor maintains the viewer profile in accordance</u>

15 <u>with a data structure comprising:</u>

<u>a list of feature values; and</u>

<u>for each element of the list, a respective number of times</u>

<u>programs having that feature value were watched, and a respective</u>

number of times programs having that feature value were not

20   watched,

and wherein the processor is further arranged to perform the

following, each time a user watches a new program,

ø   first adding, to the list, feature values or counts of

such feature values, associated with that new program;

25   ø   selecting at least one companion program to the new

program, the companion program being selected at random from a

program schedule, which companion program has not been watched; and

ø   second adding, to the list, feature values of the

companion program, or counts of such feature values.

8.   (Currently Amended)   The data processing device of claim 5~7~,

wherein the processor is further arranged to perform the following,

each time a user watches a new program: first adding, to the list,

feature values or counts of such feature values, associated with

5   that new program~;~.

9.   (Cancelled).

10.   (Currently Amended)   The data processing device of claim 1~7~,

wherein the input is a network connection.

11. (Currently Amended)   The data processing device of claim ~~1~~7,

wherein calculating comprises using a Bayesian classifier.

12. (Original)   The data processing device of claim 11, wherein

the processor is further adapted to subject the viewer profile to a

noise threshold calculation prior to using the Bayesian classifier.

13. (Currently Amended)   ~~The data processing device of claim~~

~~12~~A data processing device comprising:

        at least one input for receiving data including

                viewer profile data; and

5   data regarding a television program; and

        a processor, the processor being adapted to perform the

following:

        calculating, using a Bayesian classifier, a probability

that the television program is a desired one; and

10   supplying a recommendation regarding the television

program based on the probability,

wherein the processor is further adapted to subject the viewer

profile to a noise threshold calculation prior to using the

Bayesian classifier,

15 and wherein

    ø   the viewer profile data comprises

    ø   a list of feature values;

Ø   a respective negative count for each element of the list,

the negative count indicating a number of times programs having

20   that feature value have not been watched;

Ø   a respective positive count for each element of the list,

the positive count indicating a number of times programs having

that feature value have been watched;

Ø   the noise threshold calculation comprises

25   Ø   selecting a sub-list comprising at least feature values

having at least one specific type of feature;

Ø   choosing the highest negative count in the sub-list as the

noise threshold;

the recommendation comprises a program selected from a group having

30   at least one feature value having a positive or negative count in

the viewer profile, which count exceeds the noise threshold.

14.   (Currently Amended)   ~~The data processing device of claim

12,~~A data processing device comprising:

        at least one input for receiving data including

                viewer profile data; and

5   data regarding a television program; and

        a processor, the processor being adapted to perform the

following:

        calculating, using a Bayesian classifier, a probability

that the television program is a desired one; and

10   supplying a recommendation regarding the television

program based on the probability,

wherein the processor is further adapted to subject the viewer

profile to a noise threshold calculation prior to using the

Bayesian classifier,

15   and wherein subjecting the viewer profile to the noise threshold

further comprises using observations gathered by a known random

process to estimate a reasonable noise threshold.

15. (Original)   The data processing device of claim 13, wherein

the specific type comprises a day and time of day feature type.

16. (Original)   The data processing device of claim 13, wherein

the specific type comprises a station identification feature type.

17. (Currently Amended)   The data processing device of claim

±13, wherein the viewer profile data comprises a plurality of

respective counts of programs watched, each respective count

indicating how many programs watched had a respective feature.

18. (Original)   The data processing device of claim 17, wherein

calculating comprises calculating a probability that the television

program is in a particular class.

19. (Currently Amended)   The data processing device of claim 18, wherein the class is one of

∅   programs the viewer is interested in, and

∅   programs the viewer is not interested in.

20. (Currently Amended)   ~~The data processing device of claim 1~~A data processing device comprising:

        at least one input for receiving data including

                viewer profile data; and

5   data regarding a television program; and

        a processor, the processor being adapted to perform the following:

        calculating a probability that the television program is a desired one; and

10   supplying a recommendation regarding the television program based on the probability,

wherein calculating the probability comprises:

—   computing a prior possibility, of whether a program is desired or not;

15 —   computing a conditional probability of whether a feature fi will be present if a show is desired or not; and

—   computing a posterior probability of whether program is desired or not, based on the conditional probability and the prior probability.

21. (Currently Amended)   The data processing device of claim ~~1~~20, wherein it is assumed that programs watched are programs that the viewer is interested in.

22. (Currently Amended)   The data processing device of claim ~~1~~20, wherein the processor is further adapted to provide a recommendation regarding an additional item, other than a television program, based on the viewer profile.

23. (Currently Amended)   ~~The data processing device of claim 1~~<u>A data processing device comprising:</u>

<u>at least one input for receiving data including</u>

<u>viewer profile data; and</u>

5 <u>data regarding a television program; and</u>

<u>a processor, the processor being adapted to perform the following:</u>

<u>calculating a probability that the television program is a desired one; and</u>

10 <u>supplying a recommendation regarding the television program based on the probability,</u>

wherein the processor is further adapted to occasionally recommend a surprise show that has relatively few features in common with watched shows.

24. (Currently Amended) ~~The data processing device of claim 1~~A

data processing device comprising:

at least one input for receiving data including

viewer profile data; and

5   data regarding a television program; and

a processor, the processor being adapted to perform the

following:

calculating a probability that the television program is a

desired one; and

10   supplying a recommendation regarding the television

program based on the probability,

wherein

ø   the viewer profile comprises a list of features types and

values for such feature types;

15 ø   the feature types are selected from at least two sets,

including

ø   a first set of feature types whose values are deemed non-

independent; and

ø   a second set of feature types whose values are deemed

20 independent; and

ø   calculating a probability comprises

ø   applying a Bayesian classifier calculation corresponding

to feature types from the second set; and

Ø   applying a modified Bayesian classifier calculation

25   corresponding to feature types from the first set.

25. (Currently Amended)   The data processing device of claim

24, wherein

Ø   with respect to features of the first set, the modified

Bayesian classifier calculation considers only feature values that

5   match with a show being classified.

26-30. (Cancelled).

31. (Currently Amended)   ~~The at least one medium of claim 30~~At

least one medium readable by a data processing device and embodying

software arranged to perform the following operations:

          calculating a probability that a television program is a

5   desired one, based on a viewer profile and data regarding the

television program; and

          supplying a recommendation regarding the television

program based on the probability,

wherein the at least one medium further embodies the viewer

10   profile, the viewer profile being embodied as a data structure

comprising:

          a list of feature values; and

for each element of the list, a respective number of times programs having that feature value were watched,

15 and wherein the software is further arranged to perform the following, each time a user watches a new program,

ø   first adding, to the list, feature values or counts of such feature values, associated with that new program;

ø   selecting at least one companion program to the new

20 program, the companion program being selected at random from a program schedule, which companion program has not been watched; and

ø   second adding, to the list, feature values of the companion program, or counts of such feature values.

32. (Currently Amended)   The at least one medium of claim 2931, wherein the software is further arranged to perform the following, each time a user watches a new program: first adding, to the list, feature values or counts of such feature values, associated with

5 that new program.

33. (Currently Amended)   The at least one medium of claim 2631, wherein the at least one medium embodies the data regarding the television program.

34. (Currently Amended)   The at least one medium of claim 2631, wherein calculating comprises using a Bayesian classifier.

35. (Original)   The at least one medium of claim 34, wherein the software is further adapted to subject the viewer profile to a noise threshold calculation prior to using the Bayesian classifier.

36. (Currently Amended)   ~~The at least one medium of claim 35~~At least one medium readable by a data processing device and embodying software arranged to perform the following operations:

        calculating, using a Bayesian classifier, a probability
5   that a television program is a desired one, based on a viewer profile and data regarding the television program; and

        supplying a recommendation regarding the television program based on the probability,

wherein the software is further adapted to subject the viewer
10   profile to a noise threshold calculation prior to using the Bayesian classifier,

and wherein

ø   the viewer profile data comprises

ø   a list of feature values;

15   ø   a respective negative count for each element of the list, the negative count indicating a number of times programs having that feature value have not been watched;

Ø   a respective positive count for each element of the list,

the positive count indicating a number of times programs having

20   that feature value have been watched;

Ø   the noise threshold calculation comprises

Ø   selecting a sub-list comprising at least feature values

having at least one specific type of feature;

Ø   choosing the highest negative count in the sub-list as the

25   noise threshold;

Ø   the recommendation comprises a program selected from a

group having at least one feature value having a positive or

negative count in the viewer profile exceeding the noise threshold.

37.   (Currently Amended)   ~~The data processing device of claim

35~~At least one medium readable by a data processing device and

embodying software arranged to perform the following operations:

        calculating, using a Bayesian classifier, a probability

5   that a television program is a desired one, based on a viewer

profile and data regarding the television program; and

        supplying a recommendation regarding the television

program based on the probability,

wherein the software is further adapted to subject the viewer

10   profile to a noise threshold calculation prior to using the

Bayesian classifier,

and ~~,~~ wherein subjecting the viewer profile to the noise threshold further comprises using observations gathered by a known random process to estimate a reasonable noise threshold.

38. (Original)   The at least one medium of claim 36, wherein the specific type comprises a day and time of day feature type.

39. (Original)   The at least one medium of claim 36, wherein the specific type comprises a station identification feature type.

40. (Currently Amended)   The at least one medium of claim ~~26~~36, wherein the viewer profile data comprises a plurality of respective counts of programs watched, each respective count indicating how many programs watched had a respective feature.

41. (Original)   The at least one medium of claim 40, wherein calculating comprises calculating a probability that the television program is in a particular class.

42. (Original)   The at least one medium of claim 40, wherein the class comprises at least one of programs the viewer is interested in and programs the viewer is not interested in.

43. (Currently Amended) ~~The at least one medium of claim 26~~<u>At least one medium readable by a data processing device and embodying software arranged to perform the following operations:</u>

<u>calculating a probability that a television program is a</u>

5 <u>desired one, based on a viewer profile and data regarding the television program; and</u>

<u>supplying a recommendation regarding the television program based on the probability,</u>

wherein calculating the probability comprises:

10   computing a prior possibility, of whether a program is desired or not;

  computing a conditional probability of whether a feature fi will be present if a show is desired; and

  computing a posterior probability of whether program is

15 desired or not, based on the conditional probability and the prior probability.

44. (Currently Amended) The at least one medium of claim ~~26~~<u>43</u>, wherein it is assumed that programs watched are programs that the viewer is interested in.

45. (Currently Amended) The<u> at least one</u> medium of claim ~~26~~<u>43</u>, wherein the software is further arranged to provide a

recommendation regarding an additional item, other than a television program, based on the viewer profile.

46. (Currently Amended)   ~~The at least one medium of claim 26~~At least one medium readable by a data processing device and embodying software arranged to perform the following operations:

          calculating a probability that a television program is a

5   desired one, based on a viewer profile and data regarding the television program; and

          supplying a recommendation regarding the television program based on the probability,

wherein the software is further arranged to occasionally recommend

10   a surprise show that has relatively few features in common with watched show.

47. (Currently Amended)   ~~The at least one medium of claim 26~~At least one medium readable by a data processing device and embodying software arranged to perform the following operations:

          calculating a probability that a television program is a

5   desired one, based on a viewer profile and data regarding the television program; and

          supplying a recommendation regarding the television program based on the probability,

wherein

10   ∅   the viewer profile comprises a list of features types and

values for such feature types;

            ∅   the feature types are selected from at least two sets,

including

            ∅   a first set of feature types whose values are deemed non-

15 independent; and

            ∅   a second set of feature types whose values are deemed

independent; and

            ∅   calculating a probability comprises

            ∅   applying a Bayesian classifier calculation corresponding

20 to feature types from the second set; and

            ∅   applying a modified Bayesian classifier calculation

corresponding to feature types from the first set.

48.   (Original)   The at least one medium of claim 47, wherein with

respect to features of the first set, the modified Bayesian

25 classifier calculation considers only values that match with a show

being classified.

49-50.   (Cancelled).

51.   (Currently Amended)   A data processing method comprising

performing the following operations in a data processing device:

       —   first receiving data reflecting physical observations,

which data includes a list of feature values and observations about

5   feature values, some of which feature values are independent and

some of which are not;

—   second receiving data about an item to be classified, the

data about the item to be classified including feature values;

—   maintaining a division of the data reflecting physical

10   observations into at least two sets, including

—   a first set including those feature values which are

deemed not independent; and

—   a second set including those feature values which are

deemed independent;

15   —   performing a probabilistic calculation on the data

reflecting physical observations and the data regarding an item to

be classified including:

—   applying a Bayesian classifier calculation with respect to

feature values relating to the second set; and

20   —   applying a modified Bayesian classifier calculation with

respect to feature values relating to the first set

—   presenting a conclusion regarding the item to be

classified to a user based on the probabilistic calculation.

52.   (Original)   The method of claim 51, wherein the modified

Bayesian classifier calculation comprises ignoring feature values

from the data reflecting physical observations when those feature

values are not present in the data regarding the item to be

5   classified.